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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,509	07/18/2006	Hans-Joachim Timpe	90061/JLT	4643
1333 7590 09/12/2008 EASTMAN KODAK COMPANY PATENT LEGAL STAFF 343 STATE STREET ROCHESTER, NY 14650-2201			EXAMINER EOFF, ANCA	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 09/12/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,509	Applicant(s) TIMPE ET AL.	
	Examiner ANCA EOFF	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10-19 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-16 and 26-28 is/are allowed.
- 6) ☒ Claim(s) 1, 6, 10, 12, 17-19 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 2-5 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-6, 10-19 and 22-28 are pending in the application. Claims 7-9 and 20-21 are canceled.
2. The foreign priority document 10 2004 003 143.6, filed in Germany on January 21, 2004 was received and acknowledged. However, in order to benefit of the earlier filing date, a certified English translation is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

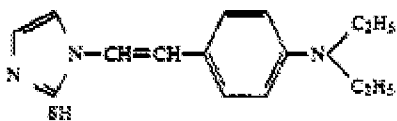
A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6, 12, 22 and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto et al. (US Patent 5,284,735), as evidenced by Huang et al. (US Patent 5,919,600).

With regard to claim 1, Okamoto et al. disclose a photopolymerizable composition useful for forming the photosensitive layer of a photosensitive printing plate (column 1, lines 12-15), wherein the photopolymerizable composition comprises:

- a high-molecular compound which is soluble or swellable with a weakly alkaline aqueous solution (column 4, lines 1-4), equivalent to the polymeric binder (i) of the instant application;

- a substituted ethylene compound, represented by the formula (I) below, equivalent to the component (ii) of formula (I) of the instant application:



(I) (compound of formulas (1) in column 4, line 26-column 5, line 35).

The compounds above are equivalent to the compound of formula (I) of the instant application, wherein Z is a heterocyclic spacer, Z¹ is a single bond, c=1, R^{1a} and R^{1b} are hydrogen atoms and R^{1c} is a substituted C₆ aryl.

While the compound (I) is not disclosed as free-radical polymerizable monomer, the compound of formula (I) above is identical to the compound of formula (I) of the instant application and may act as a free-radical polymerizable monomer due to the presence of the polymerizable ethylenically unsaturated double bond in the molecule.

- a photoinitiator (column 2, line 63), which may be any conventional product, such as halogenated compounds and sensitizing colorants (column 2, line 63-column 3, line 2). Table 1 in columns 7-8 clearly shows that photoinitiators are mixtures of compounds.

The halogenated compounds include 2-phenyl-4,6-bis(trichloromethyl)-s-triazine (column 3, lines 49-52), equivalent to the polyhalogenalkyl-substituted co-initiators of the instant application.

The sensitizing dyes may be xanthene dyes and merocyanine dyes, which are known in the art as being IR absorbers for radiation in the range of 780 nm-1300 nm, as evidenced by Huang et al. in column 4, lines 19-43.

When the photopolymerizable composition is used in fabricating a photosensitive lithographic plate, the base may be paper, plastic film or metallic plate of copper, zinc, aluminum, stainless, steel (column 6, lines 11-15), equivalent to the substrate (a) of the instant application. Of these bases, particularly desirable are aluminum plates that have been polished and anodized (column 6, lines 18-20), equivalent to the treated substrate (a) of the instant application.

With regard to claim 6, Okamoto et al. further disclose that the photopolymerizable composition comprises radical-polymerizable compounds without –SH groups (column 2, lines 37-57).

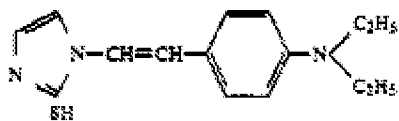
With regard to claim 12, Okamoto et al. further disclose 2,4,6-tri(trichloromethyl)-s-triazine and 2-phenyl-4,6-bis(trichloromethyl)-s-triazine (column 3, lines 49-52).

With regard to claim 22, Okamoto et al. further disclose that the photosensitive layer formed by the photopolymerizable composition may be protected with a releasable clear cover sheet against unfavorable effects of oxygen, such as sensitivity drop and deterioration of shelf stability (column 6, lines 32-36).

With regard to claims 24-25, Okamoto et al. disclose a photopolymerizable composition useful for forming the photosensitive layer of a photosensitive printing plate (column 1, lines 12-15), wherein the photopolymerizable composition comprises:

- a high-molecular compound which is soluble or swellable with a weakly alkaline aqueous solution (column 4, lines 1-4), equivalent to the polymeric binder (i) of the instant application;

- a substituted ethylene compound, represented by the formula (I) below, equivalent to the component (ii) of formula (I) of the instant application:



(I) (compound of formulas (1) in column 4, line 26-column 5, line 35).

The compounds above are equivalent to the compound of formula (I) of the instant application, wherein Z is a heterocyclic spacer, Z¹ is a single bond, c=1, R^{1a} and R^{1b} are hydrogen atoms and R^{1c} is a substituted C₆ aryl.

While the compound (I) is not disclosed as free-radical polymerizable monomer, the compound of formula (I) above is identical to the compound of formula (I) of the instant application and may act as a free-radical polymerizable monomer due to the presence of the polymerizable ethylenically unsaturated double bond in the molecule.

- a photoinitiator (column 2, line 63), which may be any conventional product, such as halogenated compounds and sensitizing colorants (column 2, line 63-column 3, line 2). Table 1 in columns 7-8 clearly shows that photoinitiators are mixtures of compounds.

The halogenated compounds include 2-phenyl-4,6-bis(trichloromethyl)-s-triazine (column 3, lines 49-52), equivalent to the polyhalogenalkyl-substituted co-initiators of the instant application.

The sensitizing dyes may be xanthene dyes and merocyanine dyes, which are known in the art as being IR absorbers for radiation in the range of 780 nm-1300 nm, as evidenced by Huang et al. in column 4, lines 19-43.

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When the photopolymerizable composition is used in fabricating a photosensitive lithographic plate, the base may be paper, plastic film or metallic plate of copper, zinc, aluminum, stainless, steel (column 6, lines 11-15), equivalent to the substrate (a) of the instant application. Of these bases, particularly desirable are aluminum plates that have been polished and anodized (column 6, lines 18-20), equivalent to the treated substrate (a) of the instant application.

Okamoto et al. further disclose that the photopolymerizable composition is coated on treated aluminum sheets and then dried (column 7, lines 42-45). An aqueous solution of polyvinyl alcohol is then applied over the photosensitive layer and then dried (column 7, lines 58-61), wherein the polyvinyl alcohol solution represents the cover sheet against the unfavorable effects of oxygen (column 6, lines 32-41).

The aluminum sheets having the photopolymerizable coating and the polyvinyl alcohol cover sheet applied thereon are exposed to light and then developed by immersion into an alkaline solution (column 8, lines 30-43).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

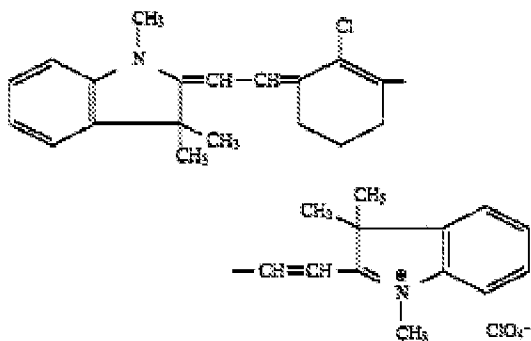
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US Patent 5,284,735) in view of Kobayashi (US Patent 5,514,521).

With regard to claim 10, Okamoto et al. disclose the lithographic printing plate precursor of claim 1 (see paragraph 4 of the Office Action), wherein the printing plate precursor may comprise sensitizing dyes (column 3, lines 53-54) and may be imaged in a broad range from ultraviolet to visible (column 6, lines 64-66) but fail to disclose the cyanine dyes of claim 10.

Kobayashi discloses a composition which may be cured with light in the range from ultraviolet to infrared, said composition comprising as spectral sensitizer a 2-(2-(2-chloro-3-(1,3-dihydro-1,3,3-trimethyl-2H-indole-2-ylidene)ethylidene)-1-cyclohexane-1yl)ethenyl)-1,3,3-trimethyl-3H indolium salt, with sensitivity to light having a wavelength ranging from visible region to near infrared region (abstract).

The spectral sensitizer is represented by the formula (II):



(II) (formula (12) in column 8, lines 20-30) and it is equivalent to the compound of formula (V) of the instant application, wherein R²⁰ is a hydrogen atom, D³ is C(alkyl)₂, r=1, R¹⁹ is a chlorine atom and R₁₈ are methyl groups.

Based on Kobayashi's teaching that the compound (II) above may be used as spectral sensitizer for visible range and Okamoto's teaching that spectral sensitizer may be used for the composition imageable in ultraviolet-visible range, it would have been

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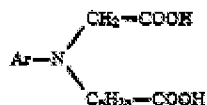
obvious to one of ordinary skill in the art at the time of the invention to use the compound (II) of Kobayashi for the composition of Okamoto et al.

7. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US Patent 5,284,735) in view of West et al. (US Patent 5,629,354).

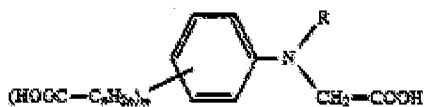
With regard to claims 17-19, Okamoto et al. disclose the lithographic printing plate precursor of claim 1 (see paragraph 4 of the Office Action), wherein the printing plate precursor may comprise sensitizing dyes (column 3, lines 53-54). Okamoto et al. further disclose that the lithographic printing plate precursor may comprise N-phenylglycine to enhance its sensitivity (column 5, lines 13-16) and may be imaged in a broad range from ultraviolet to visible (column 6, lines 64-66) but fail to disclose the polycarboxylic acids of the instant application.

West et al. disclose an addition polymerizable composition for the preparation of radiation-sensitive layers in printing plates, said composition comprising a photopolymerization initiator system comprising a spectral sensitizer for ultraviolet or visible regions and a polycarboxylic acid (abstract).

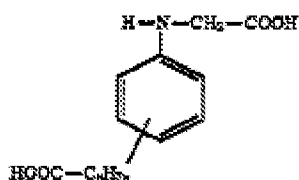
The polycarboxylic acids may be represented by the formulas (III)-(V):



(III) (column 4, lines 11-15), wherein Ar is a substituted or unsubstituted aryl group and n=1-5 (column 4, lines 18-19);



(IV) (column 4, lines 21-25), wherein $n=1-5$, $m=1-5$ and R is hydrogen or an alkyl group with 1-6 carbon atoms (column 4, lines 29-31) and



(V) (column 4, lines 35-40), wherein $n=1-5$ (column 4, line 44)..

The compounds (III)-(V) are equivalent to the compounds (VI), (VIa) and (VIb) of the instant application.

West et al. further disclose that the compounds (III)-(V) are more effective than N-phenylglycine in meeting the objectives of high photosensitivity and good-shelf life (column 5, lines 17-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the polycarboxylic acids (III)-(V) of West et al. in combination with the spectral sensitizer dyes for the composition imageable in the range ultraviolet-visible of Okamoto et al., in order to improve high sensitivity and good shelf-life (column 5, lines 17-31).

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US Patent 5,284,735) in view of Hauck et al. (US Patent 6,309,792).

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With regard to claim 23, Okamoto et al. disclose a photopolymerizable composition useful for forming the photosensitive layer of a photosensitive printing plate (column 1, lines 12-15), wherein the photopolymerizable composition comprises a high-molecular compound which is soluble or swellable with a weakly alkaline aqueous solution (column 4, lines 1-4), a substituted ethylene compound, represented by the formula (I) above, equivalent to the component (ii) of formula (I) of the instant application and a photoinitiator (column 2, line 63), as required by claim 1 above (see paragraph 4 of the Office Action).

Okamoto et al. further disclose that the high-molecular compound which is soluble or swellable with a weakly alkaline aqueous solution may be acrylic acid copolymers or methacrylic acid copolymers but fail to disclose that the high-molecular compound has an acid number > 70 mg KOH/g.

Hauck disclose a negative printing plate precursor comprising an initiator system (column 3, line 26), a polymeric binder (column 4, lines 29-45) and unsaturated free radical polymerizable monomers (column 4, line 46). Hauck et al. further disclose that the polymeric binders may be acrylic acid copolymers or methacrylic acid copolymers. In view of possible problems occurring in connection with ink acceptance during the printing process, it is preferred that the polymer has an acid number > 70 mg KOH/g (column 4, lines 29-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use polymeric binder/high-molecular compounds having an acid number > 70 mg KOH/g in the composition of Okamoto et al., in order to avoid possible

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problems occurring in connection with ink acceptance during the printing process (Hauck et al., column 4, lines 29-37).

Allowable Subject Matter

9. Claims 13-16 and 26-28 are allowed.
10. Claims 2-5 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments filed on June 13, 2008 have been considered but are moot in view of the new grounds of rejection presented above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANCA EOFF whose telephone number is (571)272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. E./

Examiner, Art Unit 1795

/Cynthia H Kelly/

Supervisory Patent Examiner, Art Unit 1795